

## MATERIAL SAFETY DATA SHEET

**SWELLSEAL<sup>®</sup> WA**  
Rev. 04/08

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SWELLSEAL<sup>®</sup> WA ( Swellseal Gungrade, Swellseal Cartridge, Swellseal Sausage, or Swellseal Bulk.)

MANUFACTURER: *de neef* Construction Chemicals Inc.  
ADDRESS: 5610 Brystone Drive  
Houston, TX 77095  
PHONE: (800) 732-0166 (7am-5pm CST Weekdays)  
FAX: (713) 849-3340  
WEBSITE: [www.deneef.com](http://www.deneef.com)

EMERGENCY PHONE: CHEMTREC (800) 424-9300 (Anytime)  
Outside US: 1-703-527-3887

### SECTION 2: HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Causes eye irritation.

#### POTENTIAL HEALTH EFFECTS

##### EYES:

Acute Eye: May causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor may cause irritation with symptoms of burning and tearing.

Chronic Eye Prolonged vapor contact may cause conjunctivitis.

##### SKIN:

Acute Skin: May cause irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash. Cured material is difficult to remove.

Chronic Skin :Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.

INGESTION: Causes irritation. Swelling of this product in airway could cause suffocation. Ingestion of this product is harmful and maybe fatal.

INHALATION: Unlikely

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### SECTION 3: HAZARDOUS INGREDIENTS

<u>Name</u>	<u>CAS NO.</u>	<u>% wt/wt</u>
Toluene diisocyanate	26471-62-5	< 0.1 %

### SECTION 4: FIRST AID MEASURES

#### EYES:

Immediately flush eyes gently with water for at least 15 minutes, while holding open upper and lower lids. Immediately seek medical attention.

#### SKIN:

Remove contaminated clothing. Blot or brush the product away, prior to washing the exposed area with water. For sever exposures, to liquid product immediately get under safety shower and begin rinsing. Get medical attention if irritation develops. The cured product on the skin is rarely a cause of irritation (If it does, seek medical attention). The process of trying to remove the cured product may cause irritation.

#### INGESTION:

Do Not Induce Vomiting. Rinse mouth out with water. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal.

#### INHALATION:

Unlikely route. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.

### SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT : > 130°C (>266°F) AUTO-IGNITION TEMPERATURE: >450°C

#### EXTINGUISHING MEDIA:

Dry Chemical, CO<sub>2</sub>, Foam or Water Fog

#### SPECIAL FIRE FIGHTING PROCEDURES:

Do not scatter material with high pressure water streams. Firefighters should wear NFPA compliant firefighting protective equipment, including self-contained breathing apparatus. During a fire, isocyanate vapors and other irritating and/or toxic gases may be generated.

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### HAZARDOUS DECOMPOSITION PRODUCTS:

Fire or intense heat will decompose the product into CO<sub>2</sub>, CO, Hydrogen Cyanide, Oxides of Nitrogen, Isocyanates, Isocyanic Acid, and dense black smoke.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### ACCIDENTAL RELEASE MEASURES:

Personal precautions: Ensure adequate ventilation if working in confined spaces. Avoid contact with eyes and wear protective clothing. Caution : spillages may be slippery.

Environmental precautions : Prevent material from entering sewage system, water courses or water treatment installations.

### CLEAN-UP PROCEDURES:

Spread sand or industrial absorbent over spillage and transfer into labeled containers for disposal. See section 13 for disposal considerations. Spilled material will polymerize under atmospheric moisture.

## SECTION 7: HANDLING AND STORAGE

HANDLING: Never spray the product; do not drink, eat or smoke during handling.

STORAGE: Keep containers dry and closed. Store in original containers. Storage temperature 5 - 25 °C ( 41°F-77°F)

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION : Normal conditions of ventilation are usually adequate.

Wear a fine particle mask or respirator, or use local exhaust ventilation as necessary when using in confined areas with inadequate ventilation.

HAND PROTECTION : Use protective gloves. Suitable types are pvc or neoprene. If in doubt seek advice from a reputable manufacturer. Barrier creams help to protect exposed areas but are no substitute for full physical protection. They should not be applied once exposure has occurred.

SKIN PROTECTION : Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Gray paste

ODOR: Sweet

**5610 Brystone Dr. Houston, Texas 77041**

**Ph: 713/896-0123 • Fax: 713/849-3340 • [www.deneef.com](http://www.deneef.com)**

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ODOR THRESHOLD: Not available

MELTING/ FREEZING PT: Not available

PHYSICAL STATE: Paste

FLASH POINT: > 130° C (266°F)

pH: Not applicable

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

EVAPORATION RATE: Not available

RELATIVE DENSITY: 1.5g/cm<sup>3</sup>

FLAMMABILITY: Not available

SOLUBILITY (H<sub>2</sub>O): Not soluble

UPPER FLAMMABILITY LIMITS: Not available

PARTITION COEFFICIENT: Not available

LOWER FLAMMABILITY LIMITS: Not available

AUTO-IGNITION TEMPERATURE: >450°C

VAPOR PRESSURE: Not available

VISCOSITY: Not available

VAPOR DENSITY: Not available

VOC CONTENT % WT: None

DECOMPOSITION TEMPERATURE: Not available

### SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal ambient conditions.

CONDITIONS TO AVOID (STABILITY): Moisture and /or heat may cause polymerization.

INCOMPATIBILITY (MATERIAL TO AVOID): Water, amines and alcohols

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None at ambient conditions

HAZARDOUS POLYMERIZATION: Will not occur at ambient conditions.

### SECTION 11: TOXICOLOGICAL INFORMATION

No information on the product itself is available.

### SECTION 12: ECOLOGICAL INFORMATION

No information on the product itself is available.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### **Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

#### **Empty Container Precautions**

Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are reacted or removed prior to disposal. Dispose of per local, state and federal guidelines. This product in its cured state is inert and non-toxic.

### **SECTION 14: TRANSPORT INFORMATION**

Not considered as dangerous goods under transport regulations.

### **SECTION 15: REGULATORY INFORMATION**

No classification required.

HMIS:

Health:1      Flammability:0      Reactivity:0

### **SECTION 16: OTHER INFORMATION**

#### **PREPARATION INFORMATION:**

April, 2008

This MSDS is on a three year review cycle. If the date on this sheet is older than three years please contact *de neef* Construction Chemicals Inc. for an updated MSDS.

#### **DISCLAIMER:**

All information appearing herein is based on manufacturer and/ or recognized technical sources. While the information is believed accurate *de neef* Construction Chemicals Inc. makes no representations as to the accuracy or sufficiency of the information.

# INSTALLATION INSTRUCTIONS

## PRODUCT NAME

### **SWELLSEAL<sup>®</sup> WA**

Gungrade Polyurethane Waterstop

## MANUFACTURER

De Neef Construction Chemicals, Inc.  
5610 Brystone Drive  
Houston, TX 77041  
1(800) 732-0166

## APPLICATION

Sheet Pile Applications  
Surface Preparation and Installation

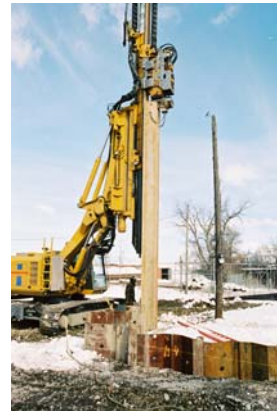
## OVERVIEW

**SWELLSEAL<sup>®</sup> WA** may be used for stopping the ingress of water through sheet piling knuckles in two ways. **SWELLSEAL<sup>®</sup> WA** can be applied to the female opening of the piles, and allowed to fully cure before driving. This method is useful if the piles are to be pretreated in the contractor yard or plant prior to shipping them to the jobsite. **SWELLSEAL<sup>®</sup> WA** can also be applied in the field and the sheets drive before the material is cured. This "wet driving" method allows the contractor to drive the sheet immediately after installation of the **SWELLSEAL<sup>®</sup> WA**.

## PREFERRED "WET" METHOD

### **Surface preparation and installation:**

1. Lay sheets out with the female side of the pile accessible.
2. Clean all foreign material and the surface layer of oxidation from the knuckle by OSHA approved chemical, flame, or abrasive method.
3. Immediately before applying sealant, blow the knuckle clean with compressed air.
4. Apply an 3/8" bead of **SWELLSEAL<sup>®</sup> WA** into the female knuckle. Do not overfill knuckle.
5. Drive the sheet pile.



## ALTERNATE "CURED" METHOD

### **Surface preparation and installation:**

1. Lay sheets out with the female side of the pile accessible.
2. Clean all foreign material and the surface layer of oxidation from the knuckle by OSHA approved chemical, flame, or abrasive method.
3. Immediately before applying sealant, solvent wipe the knuckle.
4. After the solvent flashes off, apply an 3/8" bead of **SWELLSEAL<sup>®</sup> WA** into the female knuckle. Do not overfill knuckle.
5. Tool the **SWELLSEAL<sup>®</sup> WA** in the knuckle to roughly the shape of the male interlocking member of the sheet pile.
6. Store sheet piles in such a way that they will not get standing water in the knuckle.

Rev. 04/2008



# **SWELLSEAL<sup>®</sup>**

***Waterstops for Sheet Piles***



**W a t e r p r o o f i n g   t h e   W O R L D**

**dh de neef<sup>®</sup>**  
CONSTRUCTION CHEMICALS, INC.

# THE NEED TO SEAL SHEET PILES

## *The Problem*

As the use of sheet piling in wet environments increases, so does the need to create a safe, dry work area after excavation. The high cost of dewatering and treatment, as well as increased concerns for worker safety and potential damage to the surrounding eco-system pose a challenge to both the designer and contractor.

## *The Solution*

**SWELLSEAL® WA**, hydrophilic polyurethane, offers a safe clean method of sealing sheet piling without the use of hazardous chemicals. Formulated to swell upon contact with water, hydrophilic polyurethanes can expand to any shape to form a seal against water leaking through the interlocks and penetrations in sheet piles.



**Swellseal® WA** applied with caulking gun

## **SWELLSEAL® WA**

**SWELLSEAL® WA** is a single component hydrophilic polyurethane that can be applied in wet or dry environments. Upon contact with ground water, it can swell 2 or more times its original volume. When applied to the interlocks of sheet piling, it can swell to seal a leaking interlock in the sheet



**Swellseal® WA** after driving sheet piles

## **SWELLSEAL® WA Advantages:**

- Easy to install gunnable paste
- No cure time required prior to driving sheets
- Can be applied to wet or dry surface
- Can be applied at cold temperatures
- Can wet and dry cycle repeatedly
- Can be applied to rough surfaces



## ***SWELLSEAL® WA PRODUCT PROPERTIES***

UNCURED		
Solids	100%	
Viscosity	Paste	
Density	1.45	ASTM D-3574-95
Flash point	>266° F	ASTM D-93
CURED		
Elongation at break	625%	ASTM D-3574-95
Tensile Strength	Approximately 312 psi	ASTM D-412



Withstands head pressures in excess of 330 ft.

### ***SWELLSEAL® WA Properties:***

- Single component hydrophilic polyurethane
- 200% Expansion in water
- Withstands pressures in excess of 330 ft. of head pressure
- Good chemical resistance
- Tenacious bond to wet and dry surfaces
- Conforms to the shape of the interlock
- Does not hinder the removal of sheet piles



Tieback sealed with ***HYDRO ACTIVE® CUT***

## ***REPAIR***

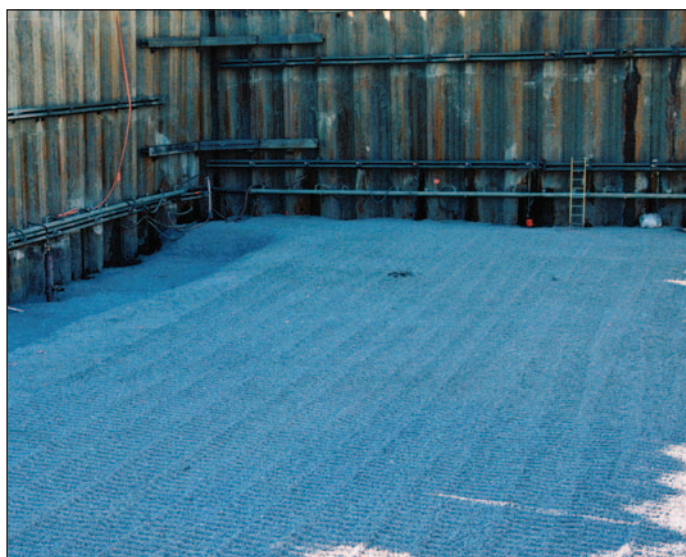
### ***Properties and Advantages:***

Leaks that appear after sealing sheets can be repaired with ***HYDRO ACTIVE® CUT***. Applied in liquid form by injection or saturation methods. ***HYDRO ACTIVE® CUT*** swells up to 20 times its original volume to cut off flowing water and seal active leaks.

### ***Ideal Repair Applications***

- Tiebacks
- Pipe penetrations
- Flowing water leaks

# INSTALLATIONS

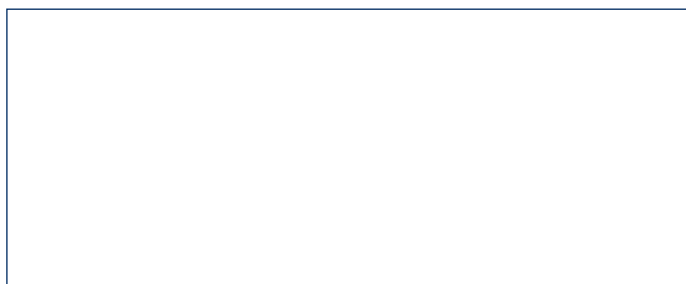


## PACKAGING

### SWELLSEAL® WA

- 10.5 ounce Tubes
- 20 ounce Sausage

## LOCAL DISTRIBUTOR



Waterproofing the WORLD



### DE NEEF CONSTRUCTION CHEMICALS

5610 Brystone Drive • Houston, Texas 77041

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## Chemical Resistance Guide for SWELLSEAL®

**SWELLSEAL® Strips and SWELLSEAL® WA**

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[www.deneef.com](http://www.deneef.com)

**Technical Service 1-800-732-0166**

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